

**REMARKS**

Claims 1-2 and 6-17 are pending in this application, of which claims 1, 10-11, 13 and 16 have been amended. Claims 3-5 have been canceled. Claim 17 is newly-added.

The specification and claims 11, 13 and 16 have been amended to correct various informalities. No new matter has been added.

Claim 11 stands rejected under 35 U.S.C. §112, second paragraph, as indefinite.

Accordingly, claim 11 has been amended to correct the noted instances of indefiniteness, and the 35 U.S.C. §112, second paragraph, rejection should be withdrawn.

Claim 10 stands rejected under 35 U.S.C. §101 for being directed to non-statutory subject matter.

Accordingly, claim 10 has been amended so it is directed to statutory subject matter. Thus, the 35 U.S.C. §101 rejection should be withdrawn.

Claims 1-16 stand rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent 6,611,698 to Yamashita et al. (hereinafter "**Yamashita et al.**") in view of **Lagerlund et al.** and/or **Towle et al.** (both cited in the specification as Admitted Prior Art).

Applicants respectfully traverse this rejection.

**Yamashita et al.** discloses an optical measuring instrument for multi-channel simultaneous measurement having an intensity of light emitted from a light source modulated at different frequencies and the light is applied to multiple positions of a test object. The light which is detected from the test object is converted into electric signals by a photodiode, and modulation signals are detected by a lock-in amplifier module.

The signals are processed as information on the test object interior by a processing unit.

FIGS. 3-5 show various incident, detection and measurement positions on the head.

The Examiner has admitted that Yamashita et al. fails to disclose a coordinate transformation section for transforming positions on the head surface to brain surface coordinates, but he has cited Lagerlund et al. and Towle et al. for teaching this feature, noting specifically that Towle et al. discloses use of a "surface-fitting algorithm" for transferring the electrode locations and best-fitting sphere to MR images of the brain and scalp, and that Towle et al. also teaches that cartesian coordinates were determined using a "localized device."

Applicants disagree. As noted in paragraph [0003] of the specification of the instant application, both of these references use a sphere fitting method wherein a brain surface and its head surface are applied to spheres each having the same center. However, paragraph [0004] discloses that because this method applies a non-spherical head surface and brain surface to a spherical surface, spatial distortion is created. The points of the head surface are not transferred to points on the actual brain surface in the best-fitting sphere method used in these references. The present invention provides this transformation by the "minimum distance search method" recited in claim 3; the "perpendicular projection method recited in claim 4; and the "head surface/brain interior reference dotted line segment connecting method" recited in claim 5, for example.

Furthermore, in order to further distinguish over the prior art, the limitations of claims 3 and 5, directed to the minimum distance search method and head surface/brain interior reference dotted line segment connecting method, respectively, have been added to claim 1 as alternative limitations, while claims 3 and 5 have been canceled. These amendments are supported in the specification in paragraphs [0012] and [0020], respectively.

Claim 1 has been further amended by deleting language reciting that the image data is obtained by taking simultaneously a plurality of members set up at positions on a head surface and a brain surface image, which is inconsistent with the limitations recited in claim 6, which depends therefrom. This subject matter is now recited in new dependent method claim 17.

Accordingly, claims 1-2 and 6-17, as amended, are in condition for allowance, which action, at an early date, is requested.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

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Respectfully submitted,

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